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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/749,221

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Ju-Ho Kim

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7590

06/20/2006

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EXAMINER

BURCH, MELODY M

ART UNIT

PAPER NUMBER

3683

DATE MAILED: 06/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/749,221	Applicant(s) KIM, JU-HO	
	Examiner Melody M. Burch	Art Unit 3683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP-11291735 (JP'735) in view of US Patent 4677263 to Hamilton et al.

Re: claim 1. JP'735 shows in figure 7 a pneumatic suspension system comprising a cylinder 22, a piston 21 disposed inside the cylinder for reciprocation in response to vehicle vibration, a piston rod 25 connected to the piston to protrude outside of the cylinder, a main spring 34 mounted inside the cylinder for absorbing shock, detecting means 36 for detecting a position and motion of the piston, an air nozzle or portion of 31 to the left of element 7, an air passage or portion of element 31 to the right of element 7 and connected to element 23 for connecting an upper side (of element 23 of cylinder 22) and lower side (of element 23 of cylinder 22) of the cylinder 22 so that air in the upper space and lower space (of the cylinder) can be circulated, and a valve 7 for opening and closing the air passage.

JP'735 is silent with regards to the air nozzle being connected to an actuator and with regards to the valve specifically being a solenoid valve. Hamilton et al. teach in figure 5 the use of an air nozzle 31 being connected to an actuator 28 and the use of a valve being in the form of a solenoid valve.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the air nozzle of JP'735 to have been connected to an actuator, as taught by Hamilton et al., in order to provide a means of permitting fluid supply to the cylinder to effect piston movement and to provide suspension control.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the valve of JP'735 to have been a solenoid valve, as taught by Hamilton et al., in order to provide a means of electrically controlling the valve to enable active control of fluid flow within the system.

Re: claim 2. JP'735, as modified, teaches in figure 7 of JP'735 wherein the detecting means comprises a magnetic belt 37 attached to the piston rod along a longitudinal direction thereof and a sensor 35 for sensing the position of the piston via the magnetic belt.

Re: claim 3. JP'735, as modified, teaches in figure 7 of JP'735 wherein the cylinder is mounted at an inner upper side and an inner lower side thereof with shock absorbing members or air particles in the upper and lower chamber regions, respectively, for absorbing shock generated by movement of the piston.

Re: claim 4. JP'735, as modified, teaches in figure 7 of JP'735 wherein the shock absorbing members are fixed to auxiliary springs 30 and 30a, particularly when the system is static, each closely abutted to the inner surface and inner lower surface of the cylinder, respectively.

Response to Arguments

3. Applicant's arguments filed 6/6/06 have been fully considered but they are not persuasive. Applicant argues that the portion of element 31 does not connect an upper side and a lower side of the cylinder, but rather connects the upper side of the cylinder to element 7. Examiner agrees that element 31 connects the upper side of the cylinder to element 7 but disagrees that the portion of element 31 does not connect an upper side and a lower side of the cylinder. The cylinder of JP'735 is represented in figure 7 by element 22. Cylinder 22 includes portions 20 and 23 as shown. The bottom surface of element 23 of the cylinder 22 is a lower side of the cylinder 22. The top surface of element 23 of the cylinder 22 is an upper side of the cylinder 22. Figure 7 clearly shows the portion of element 31 to the right of element 7 extending between and connecting the top and bottom surfaces of element 23 of the cylinder 22. Accordingly, the portion of element 31 forms a passage that connects an upper side and a lower side of the cylinder, as broadly recited. The air passage or portion of 31 enables air in the upper and lower spaces to be circulated in the sense that air introduced into the upper space moves to exert pressure on element 21 which in turn effects circulation of fluid in the lower space. Examiner notes that positively reciting such language as -- an air passage having one end directly connected to a top end of the cylinder and another end directly connected to a bottom end of the cylinder-- would preclude the broad interpretation of the JP'735 reference.

Accordingly, the rejections have been maintained.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melody M. Burch whose telephone number is 571-272-7114. The examiner can normally be reached on Monday-Friday (6:30 AM-3:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James McClellan can be reached on 571-272-6786. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3683

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

mmb
June 16, 2006

Melody M. Burch
Melody M. Burch
Primary Examiner
Art Unit 3683
6/16/06